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FOREST RESEARCH NOTES

NORTHEASTERN FOREST EXPERIMENT STATION
Upper Darby, Pennsylvania

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Improvement Cuttings On Farm Woodlands Bring Good Dividends

West Virginia farmers own one-third of the forest land in the State--more than 3 million acres. If these woodland areas were given the same attention and care that is given to cropland, within a few years West Virginia farm forests could be producing their proportionate share of the farm income. Yet the farm woods are almost completely neglected.

To determine what growth and income could be obtained from an annual harvest on managed small forests, two areas of 31 acres each on the Fernow Experimental Forest were set aside for study. The areas selected represented two different stages in the recovery of cut-over, burned-over forest land. On these two areas the original net volumes per acre of all trees 6 inches or more in diameter at breast height (International ¼-inch rule) were as follows:

	Forest No. 1 (board feet)	Forest No. 2 (board feet)
Merchantable trees	8,487	12,189
Cull trees	839	1,592
Total volume per acre	9,326	13,781

Four annual conditioning or salvage cuts have been made on each area (table 1). The first three cuts have been described.[1] In the fourth cut, made during the winter of 1952-1953, an amount of timber equal to annual growth was removed. Mine timbers and sawlogs were taken from (1) defective trees, (2) weed trees, and (3) trees that were suppressed and would probably die before that portion of the stand would be logged again.

In the first cut, the 2-man logging crew used crosscut saws and axes; skidding in Forest No. 1 was done with a team or horses. But, since farmers are tending to use more power tools, a TD-9 tractor and gasoline saws were used for all the other logging (table 2). Weather conditions were

[1] Weitzman, Sidney. Management for farm forests. W. Va. Conserv. 16 (11): 20-23, illus. 1953.

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Table 1.--Products cut and cash income received from first four annual cuts on experimental farm forests

Farm forest	Saw-logs	Mine bars	Mine props	Pulp-wood	Selling price[1]
	Board feet	Board feet	Linear feet	5-foot "cords"	Dollars
No. 1	13,300	4,761	4,613	8	599.86
No. 2	25,290	3,770	860	12	904.54
Total	38,590	8,531	5,473	20	1,504.40

[1]Price received at roadside, where they were sold.

Table 2.--Outlays for four annual cuttings on experimental farm forests

Item	Forest No. 1	Forest No. 2
Hand-logging:		
Man-hours	316	276
Horse-hours	36	0
Power-logging:		
Man-hours	274	290
Tractor-hours	11	41
Road-building:		
Man-hours	21	31
Tractor-hours	5	10
Totals:		
Man-hours	611	587
Tractor-hours	16	51
Horse-hours	36	0

not unusual for this area during any of the logging operations.

Assuming that a forest owner had used his own labor, his own horses or tractors, and his own power saw, then his only cash outlay for these cuttings would have been for additional hired hands, extra horse feed, gasoline, oil, and repairs. Under such conditions (and including one hired hand at 75 cents per hour) his total cash outlay would have been $341.79 on Forest No. 1 and $500.69 on Forest No. 2. His cash income would have been $599.86 from Forest No. 1 and $904.54 from Forest No. 2.

After the fifth cut, to be made in the winter of 1953-54, the stand will be re-inventoried to determine its rate of growth and the improvement in stand quality due to removal of defective trees. Growth of the young trees indicates that larger cuts can be made in the future. Income should also increase because of the better quality and size of the trees that can be harvested.

--CARL J. HOLCOMB